



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,157	10/20/2003	Andrew M. Spencer	10013891-1	9457
22879 7590 04/29/2009 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
EXAMINER TRUONG, THANHNGA B				
ART UNIT 2438		PAPER NUMBER		
NOTIFICATION DATE 04/29/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM

ipa.mail@hp.com

jessica.l.fusek@hp.com

### Office Action Summary

**Application No.**

10/689,157

**Applicant(s)**

SPENCER, ANDREW M.

**Examiner**

THANHNGA B. TRUONG

**Art Unit**

2438

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26, 28 and 29 is/are pending in the application.
- 4a) Of the above claim(s) 16-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 and 28-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. In view of the Appeal Brief filed on January 13, 2009, PROSECUTION IS HEREBY REOPENED. A new ground(s) of rejection is set forth below. Claims 1-26 and 28-29 are pending. Claims 16-26 are withdrawn and claims 27 and 30 are cancelled by the applicant. At this time, claims 1-15 and 28-29 are still rejected.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Signature:

/Gilberto Barron Jr./

Supervisory Patent Examiner, Art Unit 2432

### ***Response to Arguments***

2. The Appeal Brief filed January 13, 2009 has been carefully considered by an Appeal Conference. The conferees agreed that Mihm et al (US 2003/0236983 A1) and Fujita (US 6,947,318 B1) fails to teach the claimed subject matter of a removable information storage device suitable for use with a host, comprising: a non-volatile memory configured to store a master encryption key; and a non-volatile magnetic

memory configured to store encryption key ....using the encryption keys as set forth in claim 1 and the claimed subject matter as set forth in claim 27. Thus the finality of the office action mailed June 13, 2008 and the advisory action mailed on October 1, 2008 are now withdrawn. The office regrets any inconvenience due to the applicant. However, upon further consideration, a new ground(s) of rejection is made in view of Eisele (US 5,159,182).

### ***Claim Objections***

3. Claim 28 is objected to because of the following informalities:

Claim 28 recites the limitation "the encrypted encryption keys" in first line of claim 28. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Eisele (US 5,159,182).

a. *Referring to claim 1:*

i. Eisele teaches a removable information storage device (see Figures 2 and 3) suitable for use with a host, comprising:

(1) a non-volatile memory (e.g. memory 9) configured to store a master encryption key (see Figures 2, 3, and 8, element 9; column 4, lines 6 and 40; and column 5, lines 20-24 of Eisele); and

(2) a non-volatile magnetic memory configured to store encryption keys which have been encrypted using the master encryption key and to store data which has been encrypted using the encryption keys (**see Figure 3, element 7; column 4, lines 18-28; and column 5, lines 20-24 of Eisele**).

6. Claims 2-15, 28-29 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Eisele (US 5,159,182).

a. Referring to claim 28:

i. Eisele teaches a method of encrypting encryption keys using a master encryption key in an information storage device, comprising:

(1) reading the encrypted encryption keys from a magnetic random access memory; reading a master encryption key from a non-volatile memory (**see Figures 5-6; and column 5, lines 5-9 of Eisele**);

(2) decrypting each one of the encryption keys using the master encryption key (**column 5, lines 12-19 of Eisele**);

(3) encrypting data using the encryption keys (**column 5, lines 12-19 of Eisele**); and

(4) writing (e. g., storing) the encrypted data to the magnetic random access memory (**see Figures 2-3 and column 5, lines 12-24 of Eisele**).

ii. Although Eisele teaches the claimed subject matter, Eisele does not clearly use the term "magnetic random access memory (MRAM)" for disk 7 as shown in Figure 3. However, Eisele implies that the magnetic disk includes read/write heads 16 and 17, wherein MRAM uses the same read/write functionality as in disk 7 of Eisele.

iii. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to:

(1) have modified the invention of Eisele to clearly disclose disk 7 as being a magnetic random access memory (MRAM) **(see Figure 3)**.

iv. The ordinary skilled person would have been motivated to:

(1) have modified the invention of Eisele to clearly name the removable storage device disk 7 as any different type of programmable memory or storage device to store encryption keys, master keys, encryption/decryption data, program, etc.

b. Referring to claim 29:

i. Eisele further teaches:

(1) reading encrypted data from the magnetic random access memory **(see Figures 5-6; and column 5, lines 5-9 of Eisele)**; and

(2) decrypting the encrypted data using the encryption keys **(column 5, lines 12-19 of Eisele)**.

c. Referring to claim 2:

i. Eisele further teaches:

(1) an encryption and decryption engine configured to encrypt and decrypt the encryption keys using the master encryption key and to encrypt and decrypt the data using one or more of the encryption keys **(column 5, lines 12-19 of Eisele)**.

d. Referring to claim 3:

i. Eisele further teaches:

(1) wherein the first non-volatile memory is a magnetic memory **(see Figure 3, element 7; column 4, lines 18-28; and column 5, lines 20-24 of Eisele)**.

e. Referring to claim 4:

i. Eisele further teaches:

(1) wherein the first non-volatile memory is a read-only memory which includes fuse elements (see Figures 2, 3, and 8, element 9; column 4, lines 6 and 40; and column 5, lines 20-24 of Eisele).

f. Referring to claim 5:

i. Eisele further teaches:

(1) wherein the first non-volatile memory is a nitrided read-only memory (see Figures 2, 3, and 8, element 9; column 4, lines 6 and 40; and column 5, lines 20-24 of Eisele).

g. Referring to claim 6:

i. Eisele further teaches:

(1) wherein the first non-volatile memory is an erasable programmable read-only memory (see Figure 3, element 7; column 4, lines 18-28; and column 5, lines 20-24 of Eisele).

h. Referring to claim 7:

i. Eisele further teaches:

(1) wherein the first non-volatile memory is an electronically erasable programmable read-only memory (see Figure 3, element 7; column 4, lines 18-28; and column 5, lines 20-24 of Eisele).

i. Referring to claim 8:

i. Eisele further teaches:

(1) wherein the first non-volatile memory is a flash erasable programmable read-only memory (see Figure 3, element 7; column 4, lines 18-28; and column 5, lines 20-24 of Eisele).

k. Referring to claim 9:

i. Eisele further teaches:

(1) wherein the first non-volatile memory is a one time programmable read-only memory (see Figure 3, element 7; column 4, lines 18-28; and column 5, lines 20-24 of Eisele).

l. Referring to claim 10:

i. Eisele further teaches:

(1) wherein the non-volatile magnetic memory is a magnetic random access memory (see **Figure 3, element 7; column 4, lines 18-28; and column 5, lines 20-24 of Eisele**).

m. Referring to claim 11:

i. Eisele further teaches:

(1) wherein the second non-volatile memory is partitioned into first and second areas, and wherein the encrypted encryption keys are stored in the first areas and the encrypted data is stored in the second areas (**column 5, lines 20-30 of Eisele**).

n. Referring to claims 12-13:

i. These claims have limitations that is similar to those of claim 11, thus they are rejected with the same rationale applied against claim 11 above.

o. Referring to claim 14:

i. Eisele further teaches:

(1) wherein the first areas are located at one or more predetermined address locations within the second non-volatile memory (**column 5, lines 20-30 of Eisele**).

p. Referring to claim 15:

i. Eisele further teaches:

(1) wherein the first areas are located at one or more random address locations within the second non-volatile memory (**column 5, lines 20-30 of Eisele**).

### **Conclusion**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanhnga (Tanya) Truong whose telephone number is 571-272-3858.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached at 571-272-3799. The fax and phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

/Thanhnga B. Truong/  
Primary Examiner, Art Unit 2438

TBT  
April 22, 2009